



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 30, 2019

Addendum No. 1

RE: Contract # C204177

WBS # 34360.3.4

F. A. # NHF-0070 (049)

Carteret-Craven Counties (R-1015)

US-70 (Havelock Bypass) From North Of Pine Grove To North
Of Carteret County Line

February 19, 2019 Letting

To Whom It May Concern:

The Contractor's attention is directed to the fact that supplemental information has been posted to the website for this project including 1) Powerpoint that was presented at the Mandatory Pre-bid, 2) the permit application for the project, 3) Delay of Entry Parcels Contact Information and 4) Information on Railroad Private Crossing Application.

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the Structure plans:

Sheet No.	Revision
New S9-17	Added Sheet S9-17 (there were two sheet S9-16's)
S10-29	Revised quantities of Class AA Concrete for the superstructure
S11-29	Revised quantities of Class AA Concrete for the superstructure

Please void the second Sheet No. S9-16 in your plans and staple the new Sheet S9-17 thereto. Please void the existing Sheet Nos. S10-29 and S11-29 in your plans and staple the revised sheets thereto.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

Website: www.ncdot.gov

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 01-30-2019"
Table of Contents	Revised to reflect the below noted provisions being added
G-12 thru G-15	Various changes to the project special provision entitled "Special Requirements For Hauling Within Duke Energy Transmission Line Easements.
G-18	Under (A) Electronic Bidding replaced references to "Bid Express" and "Expedite" with "electronic submittal file"
G-42	Added the project special provision entitled "Central Coastal Plain Capacity Use Area Rules"
New G-43	New page to add project special provisions entitled "Electronic Bidding" and "Construction Moratorium"
New ST-55 thru ST-62	New pages to address "Camp Lejeune Railroad" requirements

Please void the Proposal Cover and staple the revised Proposal Cover thereto.

On the item sheets the following pay items have been added:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
381-0000970000-E-SP	Clearing Access For Duke	NEW ITEM	6.3 ACR
382-0000970000-E-SP	Specialized Clearing	NEW ITEM	14.31 ACR

The Contractor's bid must include these new pay items.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:

Ronald E. Davenport, Jr.

F81B8038A47A442...

Ronald E. Davenport, Jr., PE
State Contract Officer

RED/jag
Attachments

R-1015 (C204177)

Carteret-Craven Counties

cc: Mr. Lamar Sylvester, PE
Mr. Preston Hunter, PE
Mr. Ron Hancock, PE
Mr. Jon Weathersbee, PE
Mr. Ken Kennedy, PE
Ms. Lori Strickland
Project File (2)

Mr. Ray Arnold, PE
Mr. Jamie Lancaster, PE
Ms. Jaci Kincaid
Mr. Mike Gwyn
Mr. Alex Foster
Ms. Penny Higgins
Mr. Mitchell Dixon

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

PROPOSAL

INCLUDES ADDENDUM No. 1 DATED 01-30-2019

DATE AND TIME OF BID OPENING: **FEBRUARY 19, 2019 AT 2:00 PM**

CONTRACT ID C204177
WBS 34360.3.4

FEDERAL-AID NO. NHF-0070(049)
COUNTY CARTERET, CRAVEN
T.I.P. NO. R-1015
MILES 10.353
ROUTE NO. US 70
LOCATION US-70 (HAVELOCK BYPASS) FROM NORTH OF PINE GROVE TO NORTH OF
CARTERET COUNTY LINE.

TYPE OF WORK GRADING, DRAINAGE, PAVING, SIGNALS & STRUCTURES.

NOTICE:

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A ROADWAY & STRUCTURE PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

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SCHEDULE OF ESTIMATED COMPLETION PROGRESS:

(7-15-08) (Rev. 6-19-18)

108-2

SP1 G58

The Contractor's attention is directed to the Standard Special Provision entitled *Availability of Funds Termination of Contracts* included elsewhere in this proposal. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

	<u>Fiscal Year</u>	<u>Progress (% of Dollar Value)</u>
2019	(7/01/18 - 6/30/19)	5% of Total Amount Bid
2020	(7/01/19 - 6/30/20)	32% of Total Amount Bid
2021	(7/01/20 - 6/30/21)	25% of Total Amount Bid
2022	(7/01/21 - 6/30/22)	20% of Total Amount Bid
2023	(7/1/22 - 6/30/23)	15% of Total Amount Bid
2024	(7/1/23 - 6/30/24)	3% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *2018 Standard Specifications*. Any acceleration of the progress as shown by the Contractor's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

SPECIAL REQUIREMENTS FOR HAULING WITHIN DUKE ENERGY TRANSMISSION LINE EASEMENTS:**Clearing along Duke Energy Easements**

The Contractor shall perform Specialized Clearing within 100', measured perpendicular to the easement line, for each of Duke Energy's easements to prevent any trees from falling into the active lines. This Specialized Clearing shall be performed by a contractor who meets all the requirements for performing work for Duke Energy at the time work is to commence at these locations. A Preconstruction Conference shall be held with Duke Energy prior to commencing clearing within these sections. The Method of Measurement and Basis of Payment for "Specialized Clearing" will be per Acre as measured by Department personnel.

INSERT LIST OF CLEARING CONTRACTORS HERE

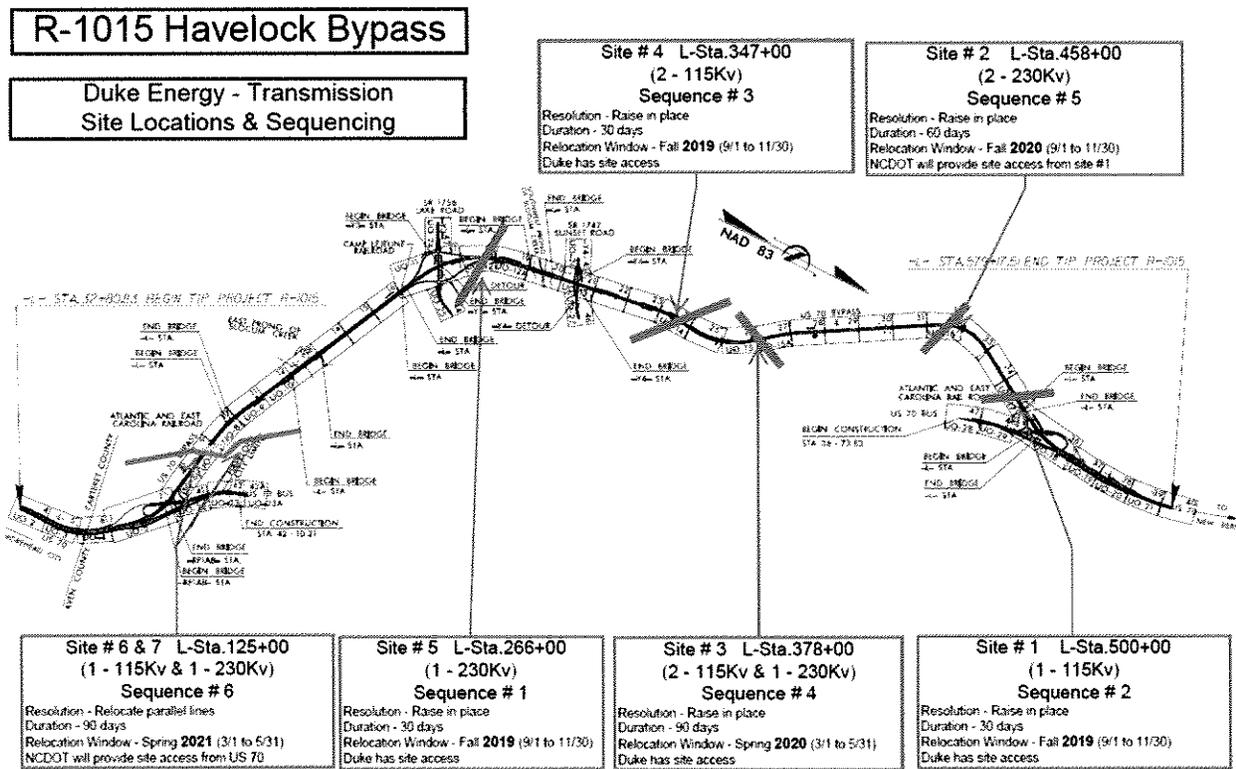
Clearing Access for Duke Energy

The Contractor shall clear a 30' wide access road from existing US 70 East to Duke Energy Site 6 & 7 (Station 125+00± -L-) and from Duke Energy Site 1 (Station 500+00± -L-) to Duke Energy Site 2 (Station 458+00± -L-) to allow Duke Energy to access their easement(s) for the purpose of performing utility relocation. The area is to be cleared, but not grubbed, and all stumps shall be left flush with the existing ground surface so as to not create damage to their mats. Access to Duke Energy Site 6 & 7 shall be made available by January 2021. Access between Duke Energy Site 1 & 2 shall be made available by July 2020. This access road shall always be clear and usable by Duke Energy.

Should the Contractor elect to clear the entire width of the Right of Way and begin grading in these locations due to the amount of time between the Date of Availability and the dates listed above,

enough grading shall be performed to allow Duke Energy to access their easements without the need for mats or tracked-equipment. The contractor shall be responsible for maintaining the access road at all times and shall in no way impede the relocation of their utility. Any expenses associated with grading equipment or water trucks to keep the route accessible for Duke Energy’s equipment shall be considered incidental to other items of work and no direct payment will be made.

If “Clearing Access for Duke Energy” is performed as a separate operation with a mobilization separate from any mobilization(s) for clearing elsewhere within the project limits, the Method of Measurement and Basis of Payment will be per Acre as measured by Department personnel. Any areas cleared as part of clearing performed elsewhere on the project will be incidental to the line item for Lump Sum Grading and no additional payment will be made. “Clearing Access for Duke Energy” shall also comply with the requirements of “Clearing along Duke Energy Easements” as noted elsewhere in this contract.



Hauling Under Duke Energy Transmission

Duke Energy has 8 Transmission Sites along the project corridor that will not be relocated prior to the Date of Availability. The anticipated relocation dates are provided elsewhere in this contract. However, hauling may be permitted under the existing Duke Energy Transmission Lines as long as the conditions set forth in this provision are met.

- All requirements set forth by Duke Energy. The Department is providing information provided by Duke Energy, but in no way guarantees this is comprehensive and complete of all stipulations that may be set forth by Duke Energy. This information is being provided solely for the Contractor’s convenience.

- The amount of fill that will be allowed to be placed under the active transmission lines will be dependent on the existing vertical clearances, Duke Energy vertical clearance requirements, OSHA Regulations, and any other State or Federal requirements. The Department is providing the existing vertical clearances from Duke Energy solely for the Contractor's convenience. In some locations, the Contractor may have to place mats to cross under the lines if there is not sufficient vertical clearance to allow any amount of fill to be placed. The contractor should not anticipate being able to place more than 4' of fill under any transmission lines or for the entire width of the roadway section or Right of Way limits. Based on the information provided by Duke Energy, crossings will not be allowed under Site 2, 3 or 4 regardless of the amount of fill or the use of mats until the lines have been relocated.

OSHA - 1910.333 Applies to NonQualified Persons: Minimum Approach Distance	
Up to 50 kV	10 Feet
50 kV up to 200 kV	15 Feet
200 kV up to 350	20 Feet
350 to 500 kV	25 Feet
500 kV to 750 kV	35 Feet

Duke Energy Transmission Minimal Vertical Ground Clearance:	
115 kV	30 feet
230 kV	32 feet

- No equipment shall encroach within 25' of any Duke Energy structure. This includes, but is not limited to poles, cross-braces, down guys, or any other appurtenance associated with the structure of Duke Energy's transmission system. Orange safety fence shall be installed a minimum of 25' off each structure should the Contractor elect to haul material across the easement prior to the facility being relocated to its final position.
- Where fill material can be placed across the easement, a maximum 4:1 side slope shall be maintained at all times to allow Duke Energy equipment to traverse across the project limits along their easement.
- Duke Energy easements shall not be used for stockpiling material, as a laydown yard, or for any purpose other than hauling from one side of the easement to the other.
- The Contractor will be permitted to cross Duke Energy's easement at an angle between 30° and 90°. Duke Energy's easement will not be used for hauling borrow material from an off-site source. The Contractor shall not pursue a borrow source that encroaches on Duke Energy's easement at any location off the project limits.
- Duke Energy shall have uncompromised access to and across their easements 24 hours a day / 7 days a week.
- All equipment traveling under the transmission lines shall have a maximum height of 13.5'. Cranes and equipment making material deliveries will be allowed to traverse across the easements to access structure sites if they do not exceed this height requirement.
- Duke Energy shall be contacted a minimum of 3 business days in advance of the first crossing of their easement. Additional contact and/or meetings may be required for subsequent crossings if deemed necessary by Duke Energy.

- The Department has submitted and received approval from Duke Energy for the “Hauling Plan” found elsewhere in this contract. Should the Contractor elect to make any deviations from this plan, it will be the Contractor’s responsibility to submit any required information to satisfy Duke Energy’s requirements. The Department will not provide any additional compensation or time extensions for any deviations in the approved work plan.
- In the event Duke Energy issues the Contractor and/or the Department a “Stop Work Order” for violation of any of the above requirements, the Contractor shall have no claim for additional compensation or time.

DISADVANTAGED BUSINESS ENTERPRISE:

(10-16-07)(Rev. 2-19-19)

102-15(J)

SPI G61

Description

The purpose of this Special Provision is to carry out the U.S. Department of Transportation’s policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with Federal funds. This provision is guided by 49 CFR Part 26.

Definitions

Additional DBE Subcontractors - Any DBE submitted at the time of bid that will not be used to meet the DBE goal. No submittal of a Letter of Intent is required.

Committed DBE Subcontractor - Any DBE submitted at the time of bid that is being used to meet the DBE goal by submission of a Letter of Intent. Or any DBE used as a replacement for a previously committed DBE firm.

Contract Goal Requirement - The approved DBE participation at time of award, but not greater than the advertised contract goal.

DBE Goal - A portion of the total contract, expressed as a percentage, that is to be performed by committed DBE subcontractor(s).

Disadvantaged Business Enterprise (DBE) - A firm certified as a Disadvantaged Business Enterprise through the North Carolina Unified Certification Program.

Goal Confirmation Letter - Written documentation from the Department to the bidder confirming the Contractor’s approved, committed DBE participation along with a listing of the committed DBE firms.

Manufacturer - A firm that operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor.

Regular Dealer - A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of

(A) Electronic Bids

Bidders shall submit a listing of DBE participation in the appropriate section of the electronic submittal file.

- (1) Submit the names and addresses of DBE firms identified to participate in the contract. If the bidder uses the updated listing of DBE firms shown in the electronic submittal file, the bidder may use the dropdown menu to access the name and address of the DBE firm.
- (2) Submit the contract line numbers of work to be performed by each DBE firm. When no figures or firms are entered, the bidder will be considered to have no DBE participation.
- (3) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the DBE goal.

(B) Paper Bids

- (1) *If the DBE goal is more than zero,*
 - (a) Bidders, at the time the bid proposal is submitted, shall submit a listing of DBE participation, including the names and addresses on *Listing of DBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the DBE participation for the contract.
 - (b) If bidders have no DBE participation, they shall indicate this on the *Listing of DBE Subcontractors* by entering the word "None" or the number "0." This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation.** Bids submitted that do not have DBE participation indicated on the appropriate form will not be read publicly during the opening of bids. The Department will not consider these bids for award and the proposal will be rejected.
 - (c) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the corresponding goal.
- (2) *If the DBE goal is zero,* entries on the *Listing of DBE Subcontractors* are not required for the zero goal, however any DBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.

The existing weight limit, if less than legal weight limit, on existing roads may be removed if requested; however, the Contractor will be responsible for maintaining these roads at his own expense in accordance with Article 105-15 of the *Standard Specifications*.

CENTRAL COASTAL PLAIN CAPACITY USE AREA (CCPCUA) RULES:

(11-17-04) (Rev. 4-17-12)

SPI

The Water Use Act of 1967 (*General Statute* 143-215.11 - .22) allows for designation of capacity use areas for regulation of water use. Over pumping of important aquifers in the coastal plain has led to the creation of the Central Coastal Plain Capacity Use Area (CCPCUA) and associated rules. The CCPCUA rules became effective on August 1, 2002 and affect a 15 county region (Beaufort, Carteret, Craven, Duplin, Edgecombe, Greene, Jones, Lenoir, Martin, Onslow, Pamlico, Pitt, Washington, Wayne, and Wilson). The CCPCUA rules require registration and reporting of water use for those persons using more than 10,000 gallons of ground water and/or surface water per day. A permit is required for persons who withdraw more than 100,000 gallons per day of ground water.

NCDOT will apply for CCPCUA permits for all proposed TIP projects requiring sizeable earthwork quantities in the affected fifteen county area.

Each contractor that utilizes a pump to dewater a borrow pit or utilizes a pump to withdraw surface water in the counties mentioned above will be required to record the volume of water pumped from each site on a daily basis. These daily recorded quantities should then be submitted for each pit on a monthly basis to the Resident Engineer. **Withdrawal rates based on pump curve data can be used in lieu of metering devices.** Included with that monthly submittal should be a record of the static and pumped water surface elevations. These two readings should be taken once each month at least 12 hours apart. The appropriate forms for recording this information are available at the following webpage:

http://www.ncdot.org/doh/operations/dp_chief_eng/roadside/fieldops/downloads/

The pumped water volumes and surface water elevations shall be recorded on the electronic form and submitted to the Resident Engineer along with a hard copy signed by the contractor. Once the Resident Engineer ensures the information is complete and accurate, it will be forwarded to the Roadside Environmental Field Operations Engineer on a quarterly basis. The Roadside Environmental Field Operations Engineer will compile this data for all pits located in the affected counties within his/her area and forward a complete package to the Roadside Environmental Unit for final review and transmittal to the Division of Water Resources.

The contractor shall assume all liability for impacts to wells or surface water bodies resulting from dewatering operations.

The contractor shall submit one additional copy of the development, use and reclamation plan and environmental assessment to the Resident Engineer. Once approved, the Resident Engineer will furnish a copy of the approved plan to the Division of Water Resources. In addition to the current required information, the reclamation plan submittal shall include:

The average daily pump discharge (in MGD),

The estimated maximum number of days of pumping during the anticipated life of the pit,
 The number and location (latitudinal and longitudinal coordinates) of wells within
 1,500 feet of the pit boundaries, and
 A determination as to whether adjoining dwellings are served by a county/municipal water
 system.

The Resident Engineer will forward the approved package to the Capacity Use Administrator at
 the following address:

Capacity Use Administrator
 DENR – DWR
 1611 Mail Service Center
 Raleigh, NC 27699-1611

ELECTRONIC BIDDING:

(2-19-19)

101, 102, 103

SP1 G140

Revise the *2018 Standard Specifications* as follows:

Page 1-4, Article 101-3, DEFINITIONS, BID (OR PROPOSAL) *Electronic Bid*, line 1,
 replace “Bid Express®” with “the approved electronic bidding provider”.

Page 1-15, Subarticle 102-8(B), Electronic Bids, lines 39-40, replace “to Bid Express®” with
 “via the approved electronic bidding provider”.

Page 1-15, Subarticle 102-8(B)(1), Electronic Bids, line 41, delete “from Bid Express®”

Page 1-17, Subarticle 102-9(C)(2), Electronic Bids, line 21, replace “Bid Express®
 miscellaneous folder within the .ebs” with “electronic submittal”.

Page 1-29, Subarticle 103-4(C)(2), Electronic Bids, line 32, replace “.ebs miscellaneous data
 file of Expedite” with “electronic submittal file”

CONSTRUCTION MORATORIUM:

(7-15-14)

SP1 G18B

No in-water work will be allowed from **April 15 through June 15** of any year for East Prong
 Slocum Creek, Southwest Prong Slocum Creek and Tucker Creek.

SPECIAL PROVISIONS FOR PROTECTION OF CAMP LEJEUNE RAILWAY INTEREST

Under the terms of these provisions, the North Carolina Department of Transportation shall hereinafter be called "Department", the Camp Lejeune Railroad shall hereinafter be called "Railroad".

The tracks of the Railroad are currently inoperative with the duration of inactivity estimated to continue through December 2020. During this inactivity the Railroad will not require flagging protection, nor will Railroad submittals be required. Should the rail line return to active service during the construction of this site or use of a temporary crossing, the flagging requirements herein may be enforced by Norfolk Southern Railway through the trackage agreement with the Railroad.

1. TRACK CLEARANCES:

- A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.
 1. A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.
 2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be as determined by the Railroad Engineer.
 3. All proposed temporary clearances which are less than those listed above must be submitted to Railroad Engineer for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.
 4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.
- B. Before undertaking any work within Railroad corridor, and before placing any obstruction over any track, the Contractor shall:
 1. Notify the Railroad's representative at least 72 hours in advance of the work.
 2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.
 3. Receive permission from the Railroad's representative to proceed with the work.
 4. Ascertain that the Department's Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

2. FLAGGING SERVICES:**A. Requirements:**

1. Flagging services will not be provided until the Contractor's insurance has been reviewed & approved by the Railroad.
2. Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's corridor, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a Railroad structure or the Railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.
3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed. Should such violations or unscheduled, unauthorized work by the Contractor result in full time flagging being required by the Railroad, the additional cost of such flagging above normal flagging cost shall be deducted from the final payment by the Department to the Contractor as provided in Article 109-9 of the Standard Specifications. Neither Department nor Railroad will be liable for damages resulting from unscheduled or unauthorized work.
4. For Projects exceeding 30 days of construction, Contractor shall provide the flagmen a small work area with a desk/counter and chair within the field/site trailer, including the use of bathroom facilities, where the flagman can check in/out with the Project, as well as to the flagman's home terminal. The work area should provide access to two (2) electrical outlets for recharging radio(s), and a laptop computer; and have the ability to print off needed documentation and orders as needed at the field/site trailer. This should aid in maximizing the flagman's time and efficiency on the Project.

B. Scheduling and Notification:

1. The Contractor's work requiring Railroad flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week.
2. Not later than the time that approval is initially requested to begin work on corridor, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within the Railroad 's corridor and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

3. The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within the Railroad's corridor in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad corridor. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days notice before flagging service may be discontinued and responsibility for payment stopped.
4. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad corridor until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department, the Railroad.

C. Payment:

1. The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction. The Contractor shall reimburse the Railroad for any costs of the flagging which is required for the benefit of the Contractor.
2. The estimated cost of flagging is the current rate per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the Department by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.
3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
4. Railroad work involved in preparing and handling bills will also be charged to the Department. Charges to the Department by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The

above estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

1. Railroad's flagman will electronically enter flagging time via Railroad's electronic billing system. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact the Railroad Engineer. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Department Engineer. Address all written correspondence electronically to Railroad Engineer.
 2. The Railroad flagman assigned to the project will be responsible for notifying the Department Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Department's Engineer will document such notification in the project records. When requested, the Department Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.
3. HAUL ACROSS RAILROAD TRACK:
- A. Where the plans show or imply that materials of any nature must be hauled across tracks of the Railroad, unless the plans clearly show that the Department has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the tracks of the Railroad. The Contractor or Department will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by Railroad personnel.
 - B. A temporary crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad within the limits of the projected right of way lines across the tracks of the Railroad, as allowed in the easement agreement between the Department and Railroad.
4. COOPERATION AND DELAYS:
- A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
 - B. No charge or claim of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railroad traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of railroad traffic or for any delays due to compliance with these special provisions.
 - C. The Contractor's attention is called to the fact that neither the Department nor Railroad assumes any responsibility for any work performed by others in connection with the construction of the project, and the Contractor shall have no claim whatsoever against the Department or Railroad for any inconvenience, delay, or additional cost incurred by him on account of such operations by others.

5. INSURANCE:

A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:

1. a. **Commercial General Liability Insurance** having a combined single limit of not less than \$2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include explosion, collapse, and underground hazard (XCU) coverage, shall be endorsed to name Railroad specified in item A.2.c. below both as the certificate holders and as an additional insureds, and shall include a severability of interests provision.
- b. **Automobile Liability Insurance** with a combined single limit of not less than \$1,000,000 each occurrence for injury to or death of persons and damage to or loss or destruction of property. Said policy or policies shall be endorsed to name Railroad specified in item A.2.c. below both as the certificate holder and as an additional insured and shall include a severability of interests provision.
2. **Railroad Protective Liability Insurance** having a combined single limit of not less than \$2,000,000 each occurrence and \$6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

- a. The insurer must be rated A- or better by A.M. Best Railroad, Inc.
- b. The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers:
 - (1) CG 00 35 01 96 and CG 28 31 10 93; or
 - (2) CG 00 35 07 98 and CG 28 31 07 98; or
 - (3) CG 00 35 10 01; or
 - (4) CG 00 35 12 04; or
 - (5) CG 00 35 12 07; or
 - (6) CG 00 35 04 13.
- c. The named insured on each policy as required to be issued to Railroad shall read: (NOTE: The below insured is to be treated separately as an insured on each railroad protective policy for a total of (2) two separate policies being issued.)

RAILROAD

Camp Lejeune Railroad

- d. The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Department project and contract identification numbers. The Description(s) and Designation(s) shall read:

Construct the US 70 Bypass route beginning near US 70 south of the Carteret County line running in an northwesterly direction to US 70 south of Carolina Pines Blvd. crossing over the tracks of Camp Lejeune Railroad at Site 4 between Electric Company Rd. and Lake Rd., identified for preliminary engineering as State Project 34360.3.2 (R-1015) in Craven County, and in connection therewith proposes to construct a pair of structures at a separated grade, across the railroad property and right-of-way, tracks and other facilities.

- e. The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number. **NOTE: Do not include any references to milepost, valuation station, or mile marker on the insurance policy.**
- f. The name and address of the prime Contractor must appear on the Declarations.
- g. The name and address of the Department must be identified on the Declarations as the “Involved Governmental Authority or Other Contracting Party.”
- h. Endorsements/forms that are required are:
- (1) Physical damage to Property Amendment
 - (2) Terrorism Risk Insurance Act (TRIA) coverage must be included
- i. Other endorsements/forms that will be accepted are:
- (1) Broad Form Nuclear Exclusion – Form IL 00 21
 - (2) 30-day Advance Notice of Non-renewal or cancellation
 - (3) Required State Cancellation Endorsement
 - (4) Quick Reference or Index Form CL/IL 240
- j. Endorsements/forms that are NOT acceptable are:
- (1) Any Pollution Exclusion Endorsement except CG 28 31
 - (2) Any Punitive or Exemplary Damages Exclusion
 - (3) Known injury or Damage Exclusion form CG 00 59
 - (4) Any Common Policy Conditions form
 - (5) An Endorsement that limits or excludes Professional Liability coverage

- (6) A Non-Cumulation of Liability of Pyramiding of Limits Endorsement
 - (7) An Endorsement that excludes TRIA coverage
 - (8) A Sole Agent Endorsement
 - (9) Any type of deductible endorsement of amendment
 - (10) Any other endorsement/form not specifically authorized in item no. 2.h above.
- B. If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad's corridor.
- C. All insurance required under the preceding subsection A shall be underwritten by insurers and be of such form and content, as may be acceptable to the Railroad. Prior to entry on Railroad's corridor, the original Railroad Protective Liability Insurance Policy and one duplicate copy shall be submitted by the Prime Contractor to the Department at the address below for its review and transmittal to the Railroad. In addition, certificates of insurance evidencing the Prime Contractor's and any subcontractors' Commercial General Liability Insurance shall be issued to the Railroad and the Department at the addresses below, and forwarded to the Department for its review and transmittal to the Railroad. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to Railroad and the Department. No work will be permitted by Railroad on the corridor until the Railroad has reviewed and approved the evidence of insurance required herein.
- D. The insurance required herein shall in no way serve to limit the liability of Department or its Contractors under the terms of this agreement.
- E. Insurance Submission Procedures
1. Railroad will only accept initial insurance submissions via US Mail or Overnight carrier to the addresses noted in C above. Railroad will NOT accept initial insurance submissions via email or faxes. **Please provide point of contact information with the submission including a phone number and email address.**
 2. Railroad requires the following two (2) forms of insurance in the initial insurance submission to be submitted under a cover letter providing details of the project and contact information.
 - a. The full original or certified true countersigned copy of the railroad protective liability insurance policy in its entirety inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements.
 - b. The Contractor's commercial general, automobile, and workers' compensation liability insurance certificate of liability insurance evidencing a combined single limit of a minimum of \$2M per occurrence of general and \$1M per occurrence of automobile liability insurance naming Camp Lejeune Railroad as the certificate holder and as an

additional insured on both the general and automobile liability insurance policy.

3. It should be noted that the Railroad does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for the Railroad to review.
 - F. The insurance amounts specified are minimum amounts and the Contractor may carry insurance in larger amounts if he so desires.
 - G. All insurance herein before specified shall be carried until the final inspection and acceptance of the Project by the Department and Railroad, or acceptance of that portion of the Project within Railroad corridor. At this point, no work or any other activities by the Contractor shall take place in corridor without written permission from the Department and Railroad.
6. FAILURE TO COMPLY:
- A. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
 1. The Railroad Engineer may require that the Contractor vacate Railroad's corridor.
 2. The Department's Engineer may withhold all monies due the Contractor on monthly statements.
 - B. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Department's Engineer.
7. PAYMENT FOR COST OF COMPLIANCE:
- No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.
8. COMPLETION AND ACCEPTANCE:
- Upon completion of the work, the Contractor shall remove from within the limits of the Railroad's corridor all machinery, equipment, surplus materials, rubbish or temporary buildings of the Contractor, and leave said corridor in a neat and orderly condition. After the final inspection has been made and work found to be completed in a satisfactory manner acceptable to the Department and the Railroad, the Department will be notified of the Railroad's acceptance in writing by the **Railroad's** Chief Engineer or his authorized representative within ten (10) days or as soon thereafter as practicable.

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0000700000-N	SP	FIELD OFFICE	Lump Sum	L.S.	
0004	0000900000-N	SP	GENERIC MISCELLANEOUS ITEM UTILITY COORDINATOR	Lump Sum	L.S.	
0005	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (138+69.74 -L-)	Lump Sum	L.S.	
0006	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (139+25.54 -L-)	Lump Sum	L.S.	
0007	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (176+32.00 -L- LT)	Lump Sum	L.S.	
0008	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (176+32.00 -L- RT)	Lump Sum	L.S.	
0009	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (227+54.13 -L-)	Lump Sum	L.S.	
0010	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (227+59.99 -L-)	Lump Sum	L.S.	
0011	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (288+29.87 -L- LT)	Lump Sum	L.S.	
0012	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (288+29.87 -L- RT)	Lump Sum	L.S.	
0013	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (44+71.82 -Y4-)	Lump Sum	L.S.	
0014	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (506+32.25 -L-)	Lump Sum	L.S.	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0015	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (506+47.11 -L-)	Lump Sum	L.S.	
0016	0028000000-N	SP	TYPE I STANDARD APPROACH FILL STATION ***** (52+32.96 -Y3-)	Lump Sum	L.S.	
0017	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (11+50.20 -RP1AB-)	Lump Sum	L.S.	
0018	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (12+01.81 -RP1AB-)	Lump Sum	L.S.	
0019	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (516+87.37 -L- LT)	Lump Sum	L.S.	
0020	0029000000-N	SP	TYPE III REINFORCED APPROACH FILL, STATION ***** (516+87.37 -L- RT)	Lump Sum	L.S.	
0021	0036000000-E	225	UNDERCUT EXCAVATION	96,000 CY		
0022	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUB- BING	5 ACR		
0023	0063000000-N	SP	GRADING	Lump Sum	L.S.	
0024	0106000000-E	230	BORROW EXCAVATION	5,793,000 CY		
0025	0127000000-N	235	EMBANKMENT SETTLEMENT GAUGES	2 EA		
0026	0134000000-E	240	DRAINAGE DITCH EXCAVATION	9,730 CY		
0027	0194000000-E	265	SELECT GRANULAR MATERIAL, CLASS III	150,000 CY		
0028	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZA- TION	72,500 SY		
0029	0199000000-E	SP	TEMPORARY SHORING	1,341.2 SF		
0030	0241000000-E	SP	GENERIC GRADING ITEM GEOTEXTILE FOR EMBANKMENT STA- BILIZATION	6,000 SY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0031	0255000000-E	SP	GENERIC GRADING ITEM HAULING & DISPOSAL OF PETROLEUM CONTAMINATED SOIL	100 TON		
0032	0318000000-E	300	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES	5,260 TON		
0033	0320000000-E	300	FOUNDATION CONDITIONING GEO- TEXTILE	16,520 SY		
0034	0342000000-E	310	*** SIDE DRAIN PIPE (30")	88 LF		
0035	0342000000-E	310	*** SIDE DRAIN PIPE (36")	52 LF		
0036	0342000000-E	310	*** SIDE DRAIN PIPE (60")	116 LF		
0037	0342000000-E	310	*** SIDE DRAIN PIPE (84")	76 LF		
0038	0343000000-E	310	15" SIDE DRAIN PIPE	524 LF		
0039	0344000000-E	310	18" SIDE DRAIN PIPE	980 LF		
0040	0345000000-E	310	24" SIDE DRAIN PIPE	272 LF		
0041	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (15", V)	548 LF		
0042	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (18", V)	400 LF		
0043	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (24", V)	416 LF		
0044	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (30", V)	548 LF		
0045	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (36", V)	3,064 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0046	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (42", V)	388	LF	
0047	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (72", V)	664	LF	
0048	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (84", V)	728	LF	
0049	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	3,580	LF	
0050	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	1,664	LF	
0051	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	684	LF	
0052	0384000000-E	310	30" RC PIPE CULVERTS, CLASS III	732	LF	
0053	0390000000-E	310	36" RC PIPE CULVERTS, CLASS III	1,436	LF	
0054	0396000000-E	310	42" RC PIPE CULVERTS, CLASS III	628	LF	
0055	0402000000-E	310	48" RC PIPE CULVERTS, CLASS III	192	LF	
0056	0414000000-E	310	60" RC PIPE CULVERTS, CLASS III	92	LF	
0057	0426000000-E	310	72" RC PIPE CULVERTS, CLASS III	404	LF	
0058	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (48")	720	LF	
0059	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (72")	932	LF	
0060	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (84")	388	LF	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0061	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	10,972 LF		
0062	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	2,460 LF		
0063	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	580 LF		
0064	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	388 LF		
0065	0448600000-E	310	36" RC PIPE CULVERTS, CLASS IV	8,212 LF		
0066	0448700000-E	310	42" RC PIPE CULVERTS, CLASS IV	396 LF		
0067	0546000000-E	310	*** CAA PIPE CULVERTS, ***** THICK (15", 0.064")	5,464 LF		
0068	0546000000-E	310	*** CAA PIPE CULVERTS, ***** THICK (18", 0.064")	694 LF		
0069	0546000000-E	310	*** CAA PIPE CULVERTS, ***** THICK (24", 0.064")	76 LF		
0070	0564000000-E	310	*** CAA PIPE ELBOWS, ***** THICK (15", 0.064")	150 EA		
0071	0564000000-E	310	*** CAA PIPE ELBOWS, ***** THICK (18", 0.064")	30 EA		
0072	0564000000-E	310	*** CAA PIPE ELBOWS, ***** THICK (24", 0.064")	4 EA		
0073	0995000000-E	340	PIPE REMOVAL	3,991 LF		
0074	0996000000-N	350	PIPE CLEAN OUT	3 EA		
0075	1000000000-E	462	6" SLOPE PROTECTION	250 SY		
0076	1077000000-E	SP	#57 STONE	400 TON		
0077	1099500000-E	505	SHALLOW UNDERCUT	1,000 CY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0078	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	2,550	TON	
0079	1111000000-E	SP	CLASS IV AGGREGATE STABILIZATION	50,600	TON	
0080	1121000000-E	520	AGGREGATE BASE COURSE	272,400	TON	
0081	1220000000-E	545	INCIDENTAL STONE BASE	2,500	TON	
0082	1275000000-E	600	PRIME COAT	14,290	GAL	
0083	1330000000-E	607	INCIDENTAL MILLING	1,500	SY	
0084	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	53,560	TON	
0085	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	156,730	TON	
0086	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	28,470	TON	
0087	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	109,310	TON	
0088	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	18,400	TON	
0089	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	1,300	TON	
0090	1840000000-E	665	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)	215,500	LF	
0091	2000000000-N	806	RIGHT-OF-WAY MARKERS	97	EA	
0092	2020000000-N	806	CONTROL-OF-ACCESS MARKERS	147	EA	
0093	2022000000-E	815	SUBDRAIN EXCAVATION	1,434	CY	
0094	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	6,400	SY	
0095	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	1,075	CY	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0096	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	6,400 LF		
0097	2070000000-N	815	SUBDRAIN PIPE OUTLET	13 EA		
0098	2077000000-E	815	6" OUTLET PIPE	78 LF		
0099	2209000000-E	838	ENDWALLS	134.3 CY		
0100	2220000000-E	838	REINFORCED ENDWALLS	101.1 CY		
0101	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	331 EA		
0102	2297000000-E	840	MASONRY DRAINAGE STRUCTURES	9.2 CY		
0103	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	60.1 LF		
0104	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	13 EA		
0105	2364200000-N	840	FRAME WITH TWO GRATES, STD 840.20	137 EA		
0106	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	133 EA		
0107	2366000000-N	840	FRAME WITH TWO GRATES, STD 840.24	11 EA		
0108	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	31 EA		
0109	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	3 EA		
0110	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	2 EA		
0111	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	2 EA		
0112	2396000000-N	840	FRAME WITH COVER, STD 840.54	2 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0113	2451000000-N	852	CONCRETE TRANSITIONAL SECTION FOR DROP INLET	9 EA		
0114	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	3,760 LF		
0115	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	1,780 LF		
0116	2556000000-E	846	SHOULDER BERM GUTTER	29,970 LF		
0117	2577000000-E	846	CONCRETE EXPRESSWAY GUTTER	2,400 LF		
0118	2591000000-E	848	4" CONCRETE SIDEWALK	100 SY		
0119	2612000000-E	848	6" CONCRETE DRIVEWAY	40 SY		
0120	2647000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	50 SY		
0121	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	1,239 LF		
0122	2752000000-E	SP	GENERIC PAVING ITEM MEDIAN HAZARD PROTECTION	426 LF		
0123	2815000000-N	858	ADJUSTMENT OF DROP INLETS	3 EA		
0124	3001000000-N	SP	IMPACT ATTENUATOR UNITS, TYPE TL-3	8 EA		
0125	3030000000-E	862	STEEL BEAM GUARDRAIL	50,425 LF		
0126	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	22 EA		
0127	3215000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE III	8 EA		
0128	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	53 EA		
0129	3288000000-N	SP	GUARDRAIL END UNITS, TYPE TL-2	2 EA		
0130	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-77	63 EA		
0131	3360000000-E	863	REMOVE EXISTING GUARDRAIL	640 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0132	3380000000-E	862	TEMPORARY STEEL BEAM GUARDRAIL	888 LF		
0133	3389150000-N	SP	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-2)	4 EA		
0134	3389200000-E	865	CABLE GUIDERAIL	47,250 LF		
0135	3389500000-N	865	ADDITIONAL GUIDERAIL POSTS	18 EA		
0136	3389600000-N	865	CABLE GUIDERAIL ANCHOR UNITS	36 EA		
0137	3503000000-E	866	WOVEN WIRE FENCE, 47" FABRIC	108,660 LF		
0138	3509000000-E	866	4" TIMBER FENCE POSTS, 7'-6" LONG	6,920 EA		
0139	3515000000-E	866	5" TIMBER FENCE POSTS, 8'-0" LONG	1,550 EA		
0140	3578000000-N	SP	GENERIC FENCING ITEM 16' USFS WELDED PIPE GATES	14 EA		
0141	3628000000-E	876	RIP RAP, CLASS I	2,020 TON		
0142	3649000000-E	876	RIP RAP, CLASS B	900 TON		
0143	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	9,800 SY		
0144	4048000000-E	902	REINFORCED CONCRETE SIGN FOUN- DATIONS	16 CY		
0145	4054000000-E	902	PLAIN CONCRETE SIGN FOUNDA- TIONS	4 CY		
0146	4057000000-E	SP	OVERHEAD FOOTING	148 CY		
0147	4060000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	14,533 LB		
0148	4066000000-E	903	SUPPORTS, SIMPLE STEEL BEAM	7,946 LB		
0149	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	306 LF		
0150	4082000000-E	903	SUPPORTS, WOOD	4,474 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0151	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (22+05 -RP1AB-)	Lump Sum	L.S.	
0152	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (42+00 -L-)	Lump Sum	L.S.	
0153	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (504+50 -L-)	Lump Sum	L.S.	
0154	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (544+00 -L-)	Lump Sum	L.S.	
0155	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (57+15 -RP2AC-)	Lump Sum	L.S.	
0156	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (58+50 -L-)	Lump Sum	L.S.	
0157	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (76+00 -L-)	Lump Sum	L.S.	
0158	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (89+84 -L-)	Lump Sum	L.S.	
0159	4096000000-N	904	SIGN ERECTION, TYPE D	12 EA		
0160	4102000000-N	904	SIGN ERECTION, TYPE E	125 EA		
0161	4108000000-N	904	SIGN ERECTION, TYPE F	27 EA		
0162	4109000000-N	904	SIGN ERECTION, TYPE *** (OVER-HEAD) (A)	14 EA		
0163	4109000000-N	904	SIGN ERECTION, TYPE *** (OVER-HEAD) (B)	7 EA		
0164	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)	29 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0165	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)	22	EA	
0166	4114000000-N	904	SIGN ERECTION, MILEMARKERS	22	EA	
0167	4115000000-N	904	SIGN ERECTION, OVERLAY (OVER- HEAD)	3	EA	
0168	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (E)	8	EA	
0169	4141000000-N	907	DISPOSAL OF SUPPORT, WOOD	8	EA	
0170	4158000000-N	907	DISPOSAL OF SIGN SYSTEM, WOOD	56	EA	
0171	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	752	SF	
0172	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	832	SF	
0173	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	384	SF	
0174	4415000000-N	1115	FLASHING ARROW BOARD	6	EA	
0175	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	4	EA	
0176	4430000000-N	1130	DRUMS	860	EA	
0177	4445000000-E	1145	BARRICADES (TYPE III)	208	LF	
0178	4455000000-N	1150	FLAGGER	60	DAY	
0179	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	3	EA	
0180	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	1	EA	
0181	4480000000-N	1165	TMA	4	EA	
0182	4485000000-E	1170	PORTABLE CONCRETE BARRIER	5,220	LF	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0183	4500000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER	610 LF		
0184	4510000000-N	1190	LAW ENFORCEMENT	40 HR		
0185	4516000000-N	1180	SKINNY DRUM	500 EA		
0186	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	400 EA		
0187	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	20,359 LF		
0188	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	24,986 LF		
0189	4688000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)	258,306 LF		
0190	4690000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 120 MILS)	35,807 LF		
0191	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	249 LF		
0192	4697000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)	465 LF		
0193	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	9,926 LF		
0194	4702000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 120 MILS)	3,507 LF		
0195	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	609 LF		
0196	4721000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)	32 EA		
0197	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	100 EA		
0198	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	51,288 LF		
0199	4815000000-E	1205	PAINT PAVEMENT MARKING LINES (6")	147,366 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0200	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	208 LF		
0201	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	10 EA		
0202	4847020000-E	1205	POLYUREA PAVEMENT MARKING LINES (4", 30 MILS)	2,334 LF		
0203	4847040000-E	1205	POLYUREA PAVEMENT MARKING LINES (6", 30 MILS)	18,160 LF		
0204	4847080000-E	1205	POLYUREA PAVEMENT MARKING LINES (12", 30 MILS)	819 LF		
0205	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	80 LF		
0206	4855000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (6")	2,500 LF		
0207	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	20 LF		
0208	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	147 EA		
0209	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	2,693 EA		
0210	6000000000-E	1605	TEMPORARY SILT FENCE	503,715 LF		
0211	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	660 TON		
0212	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	32,100 TON		
0213	6012000000-E	1610	SEDIMENT CONTROL STONE	23,000 TON		
0214	6015000000-E	1615	TEMPORARY MULCHING	560.5 ACR		
0215	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	25,500 LB		
0216	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED- ING	128.5 TON		
0217	6024000000-E	1622	TEMPORARY SLOPE DRAINS	55,000 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0218	6029000000-E	SP	SAFETY FENCE	70,000 LF		
0219	6030000000-E	1630	SILT EXCAVATION	65,100 CY		
0220	6036000000-E	1631	MATTING FOR EROSION CONTROL	79,000 SY		
0221	6037000000-E	SP	COIR FIBER MAT	700 SY		
0222	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	10,550 SY		
0223	6042000000-E	1632	1/4" HARDWARE CLOTH	14,200 LF		
0224	6043000000-E	SP	LOW PERMEABILITY GEOTEXTILE	1,300 SY		
0225	6046000000-E	1636	TEMPORARY PIPE FOR STREAM CROSSING	600 LF		
0226	6069000000-E	1638	STILLING BASINS	700 CY		
0227	6070000000-N	1639	SPECIAL STILLING BASINS	26 EA		
0228	6071012000-E	SP	COIR FIBER WATTLE	78,000 LF		
0229	6071020000-E	SP	POLYACRYLAMIDE (PAM)	36,350 LB		
0230	6071030000-E	1640	COIR FIBER BAFFLE	20,000 LF		
0231	6071050000-E	SP	*** SKIMMER (1-1/2")	53 EA		
0232	6071050000-E	SP	*** SKIMMER (2")	4 EA		
0233	6084000000-E	1660	SEEDING & MULCHING	753 ACR		
0234	6087000000-E	1660	MOWING	702 ACR		
0235	6090000000-E	1661	SEED FOR REPAIR SEEDING	5,400 LB		
0236	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	30 TON		
0237	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	18,675 LB		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0238	6108000000-E	1665	FERTILIZER TOPDRESSING	560.15	TON	
0239	6111000000-E	SP	IMPERVIOUS DIKE	1,275	LF	
0240	6114500000-N	1667	SPECIALIZED HAND MOWING	450	MHR	
0241	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	100	EA	
0242	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	12	EA	
0243	6120000000-E	SP	CULVERT DIVERSION CHANNEL	3,132	CY	
0244	6123000000-E	1670	REFORESTATION	0.1	ACR	
0245	6141000000-E	SP	GENERIC EROSION CONTROL ITEM NATURAL FIBER MATTING	445,000	SY	
0246	7060000000-E	1705	SIGNAL CABLE	5,950	LF	
0247	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	33	EA	
0248	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	4	EA	
0249	7144000000-E	1705	VEHICLE SIGNAL HEAD (12", 5 SECTION)	4	EA	
0250	7252000000-E	1710	MESSENGER CABLE (1/4")	14,550	LF	
0251	7264000000-E	1710	MESSENGER CABLE (3/8")	1,360	LF	
0252	7279000000-E	1715	TRACER WIRE	26,630	LF	
0253	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 2"))	2,550	LF	
0254	7300000000-E	1715	UNPAVED TRENCHING (***** (2, 2"))	13,560	LF	
0255	7300000000-E	1715	UNPAVED TRENCHING (***** (3, 2"))	270	LF	
0256	7300000000-E	1715	UNPAVED TRENCHING (***** (4, 2"))	30	LF	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0257	7300100000-E	1715	UNPAVED TRENCHING FOR TEMP-ORARY LEAD-IN	10 LF		
0258	7301000000-E	1715	DIRECTIONAL DRILL (***** (1, 2")	900 LF		
0259	7301000000-E	1715	DIRECTIONAL DRILL (***** (1, 6")	860 LF		
0260	7301000000-E	1715	DIRECTIONAL DRILL (***** (2, 2")	5,960 LF		
0261	7301000000-E	1715	DIRECTIONAL DRILL (***** (3, 2")	50 LF		
0262	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	42 EA		
0263	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	61 EA		
0264	7372000000-N	1721	GUY ASSEMBLY	35 EA		
0265	7396000000-E	1722	1/2" RISER WITH WEATHERHEAD	1 EA		
0266	7420000000-E	1722	2" RISER WITH WEATHERHEAD	14 EA		
0267	7430000000-N	1722	HEAT SHRINK TUBING RETROFIT KIT	22 EA		
0268	7432000000-E	1722	2" RISER WITH HEAT SHRINK TUBING	16 EA		
0269	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	1,850 LF		
0270	7456000000-E	1726	LEAD-IN CABLE (***** (14-2)	6,620 LF		
0271	7516000000-E	1730	COMMUNICATIONS CABLE (**FIBER) (24)	72,940 LF		
0272	7528000000-E	1730	DROP CABLE	10,000 LF		
0273	7540000000-N	1731	SPLICE ENCLOSURE	23 EA		
0274	7541000000-N	1731	MODIFY SPLICE ENCLOSURE	1 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0275	7552000000-N	1731	INTERCONNECT CENTER	31	EA	
0276	7566000000-N	1733	DELINEATOR MARKER	23	EA	
0277	7575160000-E	1734	REMOVE EXISTING COMMUNICATIONS CABLE	5,190	LF	
0278	7576000000-N	SP	METAL STRAIN SIGNAL POLE	12	EA	
0279	7613000000-N	SP	SOIL TEST	20	EA	
0280	7614100000-E	SP	DRILLED PIER FOUNDATION	72	CY	
0281	7636000000-N	1745	SIGN FOR SIGNALS	15	EA	
0282	7684000000-N	1750	SIGNAL CABINET FOUNDATION	3	EA	
0283	7696000000-N	1751	CONTROLLERS WITH CABINET (*****) (2070E)	17	EA	
0284	7901000000-N	1753	CABINET BASE EXTENDER	3	EA	
0285	7960000000-N	SP	METAL POLE FOUNDATION REMOVAL	4	EA	
0286	7972000000-N	SP	METAL POLE REMOVAL	4	EA	
0287	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV CAMERA ASSEMBLY	7	EA	
0288	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV CAMERA EXTENSION POLE	2	EA	
0289	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV WOOD POLE	5	EA	
0290	7980000000-N	SP	GENERIC SIGNAL ITEM CONTROLLER (TYPE 2070E)	3	EA	
0291	7980000000-N	SP	GENERIC SIGNAL ITEM DETECTOR CARD (TYPE 2070E)	136	EA	
0292	7980000000-N	SP	GENERIC SIGNAL ITEM DMS ACCESS LADDER	2	EA	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0293	7980000000-N	SP	GENERIC SIGNAL ITEM DMS TYPE A	2 EA		
0294	7980000000-N	SP	GENERIC SIGNAL ITEM DMS TYPE A STRUCTURE	2 EA		
0295	7980000000-N	SP	GENERIC SIGNAL ITEM DMS TYPE B	6 EA		
0296	7980000000-N	SP	GENERIC SIGNAL ITEM DMS TYPE B STRUCTURE	6 EA		
0297	7980000000-N	SP	GENERIC SIGNAL ITEM ELECTRICAL SERVICE FOR ITS DEVICE	12 EA		
0298	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	20 EA		
0299	7980000000-N	SP	GENERIC SIGNAL ITEM FIELD EQUIPMENT CABINET	6 EA		
0300	7980000000-N	SP	GENERIC SIGNAL ITEM FURNISH CCTV CAMERA ASSEMBLY	7 EA		
0301	7980000000-N	SP	GENERIC SIGNAL ITEM JUNCTION BOX MARKER	37 EA		
0302	7980000000-N	SP	GENERIC SIGNAL ITEM MICROWAVE VEHICLE DETECTION SYSTEM-MULTIPLE ZONES	9 EA		
0303	7980000000-N	SP	GENERIC SIGNAL ITEM WOOD PEDESTAL	2 EA		
0304	7992000000-E	SP	GENERIC SIGNAL ITEM DMS FOUNDATION	48 CY		
0381	0000970000-E	SP	GENERIC MISCELLANEOUS ITEM CLEARING ACCESS FOR DUKE	6.3 ACR		
0382	0000970000-E	SP	GENERIC MISCELLANEOUS ITEM SPECIALIZED CLEARING	14.31 ACR		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
CULVERT ITEMS						
0305	8126000000-N	414	CULVERT EXCAVATION, STA ***** (44+89.00-RP2AC-)	Lump Sum	L.S.	
0306	8126000000-N	414	CULVERT EXCAVATION, STA ***** (509+41.00-L-)	Lump Sum	L.S.	
0307	8133000000-E	414	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	1,025 TON		
0308	8196000000-E	420	CLASS A CONCRETE (CULVERT)	2,346.4 CY		
0309	8217000000-E	425	REINFORCING STEEL (BRIDGE)	206,812 LB		
WALL ITEMS						
0310	8801000000-E	SP	MSE RETAINING WALL NO **** (1)	8,200 SF		
0311	8801000000-E	SP	MSE RETAINING WALL NO **** (2)	4,600 SF		
0312	8801000000-E	SP	MSE RETAINING WALL NO **** (3)	6,400 SF		
0313	8801000000-E	SP	MSE RETAINING WALL NO **** (4)	5,400 SF		
STRUCTURE ITEMS						
0314	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ***** (177+67.00-L-)	Lump Sum	L.S.	
0315	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ***** (287+62.50-L-)	Lump Sum	L.S.	
0316	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 138+31.09-L-LT)	Lump Sum	L.S.	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0317	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 138+31.09-L-RT)	Lump Sum	L.S.	
0318	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 227+57.02-L-LT)	Lump Sum	L.S.	
0319	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 227+57.02-L-RT)	Lump Sum	L.S.	
0320	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 44+71.82-Y4-)	Lump Sum	L.S.	
0321	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 506+32.25-L-LT)	Lump Sum	L.S.	
0322	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 506+32.25-L-RT)	Lump Sum	L.S.	
0323	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (1, 52+32.96-Y3-)	Lump Sum	L.S.	
0324	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (2, 138+31.09-L-LT)	Lump Sum	L.S.	
0325	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (2, 138+31.09-L-RT)	Lump Sum	L.S.	
0326	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (2, 227+57.02-L-LT)	Lump Sum	L.S.	
0327	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (2, 227+57.02-L-RT)	Lump Sum	L.S.	
0328	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (2, 506+32.25-L-LT)	Lump Sum	L.S.	
0329	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (2, 506+32.25-L-RT)	Lump Sum	L.S.	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0330	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (3, 138+31.09-L-LT)	Lump Sum	L.S.	
0331	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ***** (3, 138+31.09-L-RT)	Lump Sum	L.S.	
0332	8112730000-N	450	PDA TESTING	38 EA		
0333	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	340,594 SF		
0334	8161000000-E	420	GROOVING BRIDGE FLOORS	308,222 SF		
0335	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	1,140.6 CY		
0336	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	4,001.5 CY		
0337	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (11+76.30-RP1AB-LT)	Lump Sum	L.S.	
0338	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (11+76.30-RP1AB-RT)	Lump Sum	L.S.	
0339	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (138+31.09-L-LT)	Lump Sum	L.S.	
0340	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (138+31.09-L-RT)	Lump Sum	L.S.	
0341	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (177+67.00-L-LT)	Lump Sum	L.S.	
0342	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (177+67.00-L-RT)	Lump Sum	L.S.	
0343	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (227+57.02-L-LT)	Lump Sum	L.S.	
0344	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (227+57.02-L-RT)	Lump Sum	L.S.	

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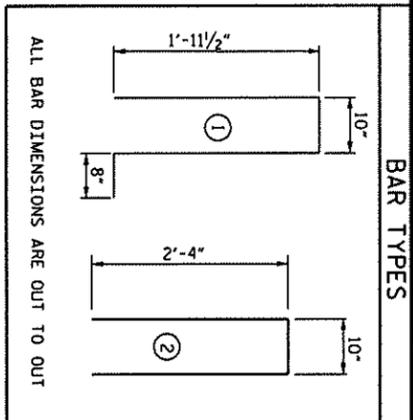
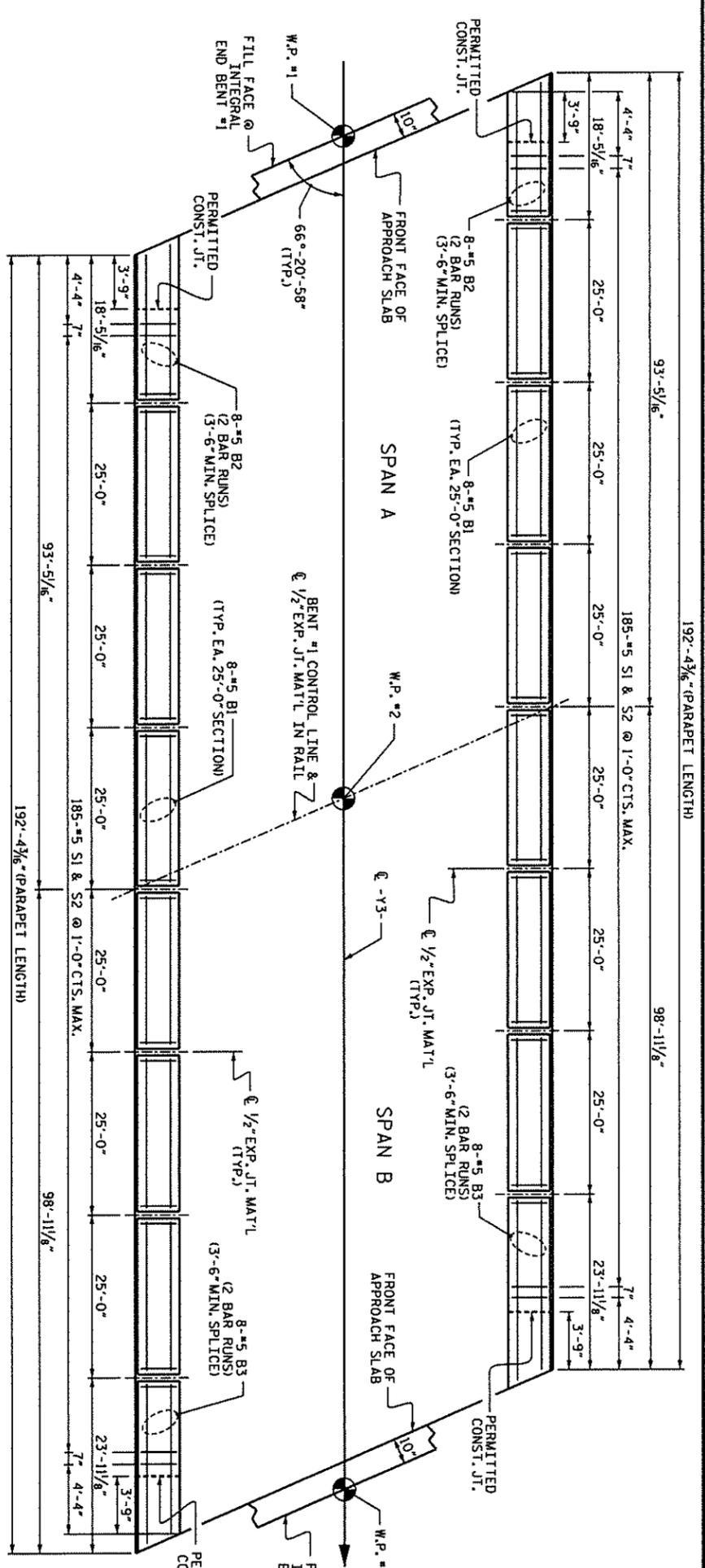
Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0345	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (287+62.50-L-LT)	Lump Sum	L.S.	
0346	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (287+62.50-L-RT)	Lump Sum	L.S.	
0347	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (44+71.82-Y4-)	Lump Sum	L.S.	
0348	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (506+32.25-L-LT)	Lump Sum	L.S.	
0349	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (506+32.25-L-RT)	Lump Sum	L.S.	
0350	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (516+87.37-L-LT)	Lump Sum	L.S.	
0351	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (516+87.37-L-RT)	Lump Sum	L.S.	
0352	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (52+32.96-Y3-)	Lump Sum	L.S.	
0353	8217000000-E	425	REINFORCING STEEL (BRIDGE)	605,741 LB		
0354	8224000000-E	425	EPOXY COATED REINFORCING STEEL (BRIDGE)	184,196 LB		
0355	8238000000-E	425	SPIRAL COLUMN REINFORCING STEEL (BRIDGE)	47,027 LB		
0356	8265000000-E	430	54" PRESTRESSED CONCRETE GIR- DERS	8,099.63 LF		
0357	8277000000-E	430	MODIFIED 72" PRESTRESSED CONC GIRDERS	1,892.44 LF		
0358	8328000000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** PRESTRESSED CONCRETE PILES (12")	92 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0359	8328000000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** PRESTRESSED CONCRETE PILES (20")	84 EA		
0360	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP12X53)	575 EA		
0361	8328400000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** GALVANIZED STEEL PILES (PP14X0.50)	28 EA		
0362	8329000000-E	450	12" PRESTRESSED CONCRETE PILES	5,020 LF		
0363	8336000000-E	450	20" PRESTRESSED CONCRETE PILES	4,760 LF		
0364	8364000000-E	450	HP12X53 STEEL PILES	43,865 LF		
0365	8385200000-E	450	PP ** X **** GALVANIZED STEEL PILES (14X0.50)	2,510 LF		
0366	8391000000-N	450	STEEL PILE POINTS	34 EA		
0367	8392000000-N	450	PIPE PILE PLATES	28 EA		
0368	8392500000-E	450	PREDRILLING FOR PILES	274 LF		
0369	8393000000-N	450	PILE REDRIVES	801 EA		
0370	8475000000-E	460	TWO BAR METAL RAIL	712.59 LF		
0371	8503000000-E	460	CONCRETE BARRIER RAIL	15,087.36 LF		
0372	8517000000-E	460	1'-***X ***** CONCRETE PARA-PET (1'-2" X 2'-6")	744.24 LF		
0373	8531000000-E	462	4" SLOPE PROTECTION	12,882.3 SY		
0374	8608000000-E	876	RIP RAP CLASS II (2'-0" THICK)	1,883 TON		
0375	8622000000-E	876	GEOTEXTILE FOR DRAINAGE	2,128 SY		
0376	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	

County : Carteret, Craven

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0377	8706000000-N	SP	EXPANSION JOINT SEALS	Lump Sum	L.S.	
0378	8867000000-E	SP	GENERIC STRUCTURE ITEM HP14X73 METALLIZED STEEL PILES	34,740 LF		
0379	8867000000-E	SP	GENERIC STRUCTURE ITEM MODIFIED 74" PRESTRESSED CONCRETE GIRDERS	28,382.49 LF		
0380	8897000000-N	SP	GENERIC STRUCTURE ITEM PILE DRIVING EQUIPMENT SETUP FOR HP14X73 METALIZED STEEL PILES	396 EA		
0924/Jan30/Q11590479.31/D1777009182000/E382			Total Amount Of Bid For Entire Project :			



BILL OF MATERIAL		PARAPET & FOUR END POSTS			
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
*B1	96	5	STR	24'-7"	2461
*B2	32	5	STR	10'-8"	356
*B3	32	5	STR	13'-9"	459
*E1	8	7	STR	2'-6"	41
*E2	8	7	STR	3'-0"	49
*E3	8	7	STR	3'-6"	57
*E4	8	7	STR	4'-0"	65
*E5	8	7	STR	4'-4"	71
*F1	4	6	STR	1'-10"	11
*F2	4	6	STR	2'-1"	13
*F3	4	6	STR	3'-0"	18
*F4	4	6	STR	3'-5"	21
*F5	4	6	STR	3'-4"	20
*F6	4	6	STR	3'-9"	23
*S1	370	5	1	5'-5"	2090
*S2	370	5	2	5'-6"	2123
*S3	32	5	5	3'-0"	100
*EPOXY COATED REINFORCING STEEL		LBS.		7978	
CLASS AA CONCRETE		CU. YDS.		43.1	
1'-2" X 2'-6" CONCRETE PARAPET		LIN. FT.		384.7	

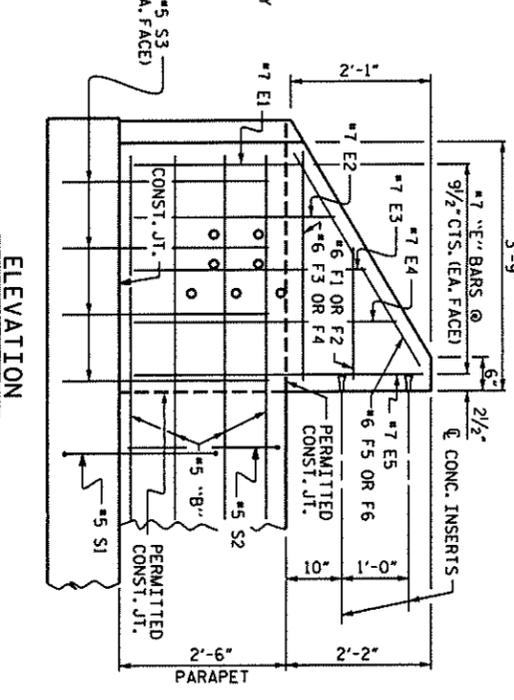
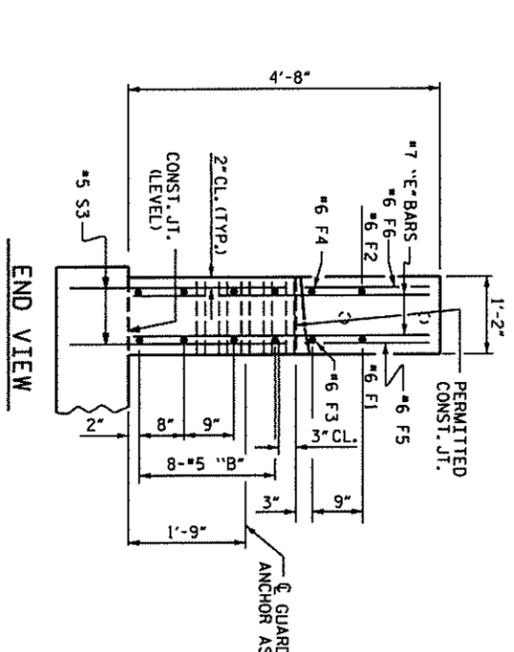
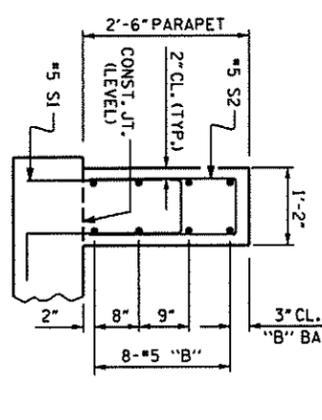
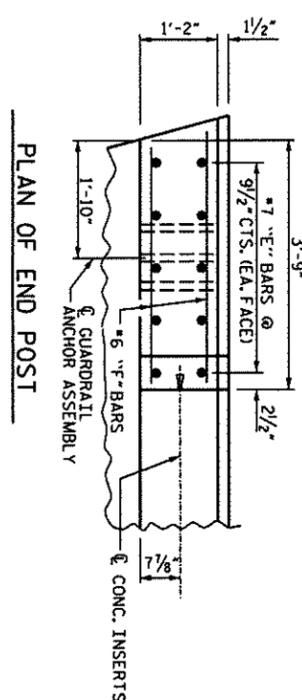
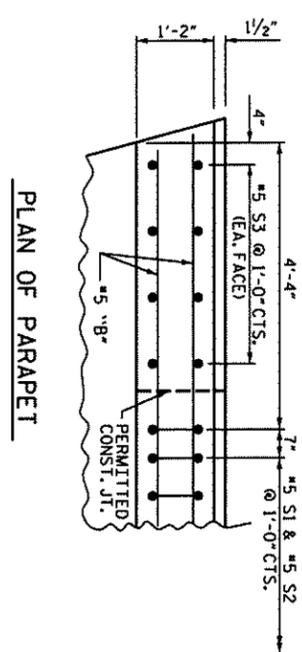
NOTES

PARAPET IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THE UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL REINFORCING STEEL IN PARAPETS AND END POSTS SHALL BE EPOXY COATED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE PARAPET AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN PARAPET EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF PARAPET SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

THE #5 S3 BARS SHALL BE INSTALLED USING AN ADHESIVE ANCHORING SYSTEM AFTER SAWING THE JOINT. THE YIELD LOAD FOR THE #5 S3 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.



DRAWN BY: J.B.W.
 CHECKED BY: T.L.B.
 DESIGN ENGINEER OF RECORD: T.L.B.

DATE: 2/20/18
 DATE: 2/20/18
 DATE: 2/20/18

PARAPET AND END POST FOR TWO BAR RAIL

4601 Lakebonnet Trail, Suite 3C, Raleigh, NC 27607
 Phone: 919.981.0310 Fax: 919.981.0451
 www.alphaandomega.com Firm License No. C-1684
 A&O PROJECT NO. 2015.042

ALPHA & OMEGA GROUP
 CIVIL / STRUCTURAL WATER RESOURCES

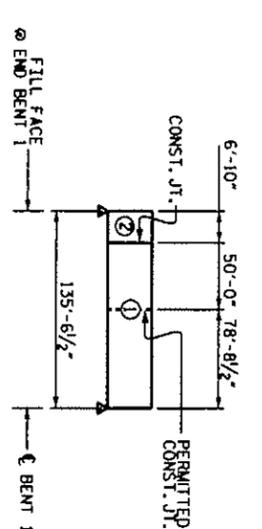
NO.	REV.	DATE	BY	DATE	BY
1	1				
2	1				

PROJECT NO. R-1015
 COUNTY CRAVEN
 STATION: 52+32.96 -Y3-

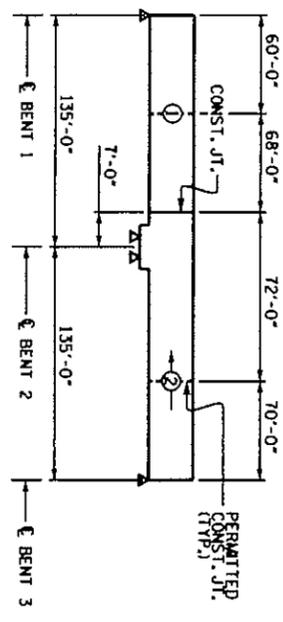
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 MATERIAL

1'-2" X 2'-6" CONCRETE PARAPET & END POST DETAILS

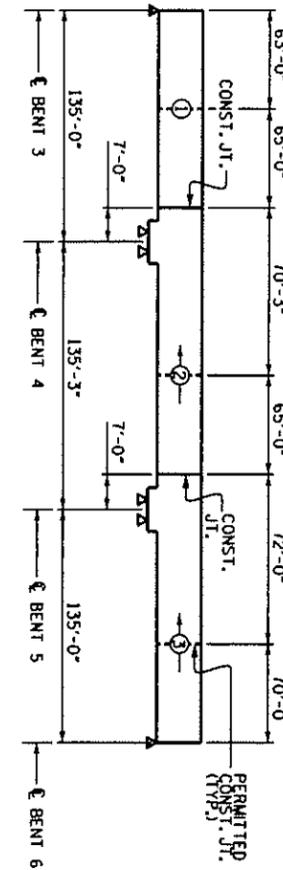
SHEET NO. 32 OF 32



SPAN A OR G
(SPAN A SHOWN, SPAN G OPPOSITE HAND)



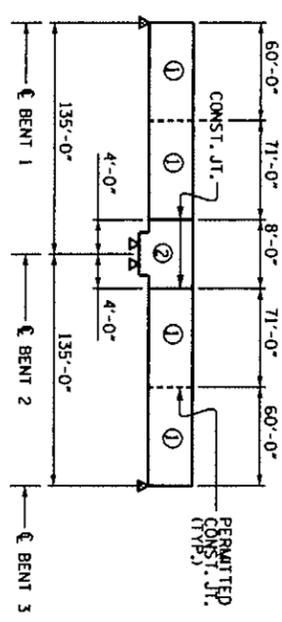
SPANS B-C



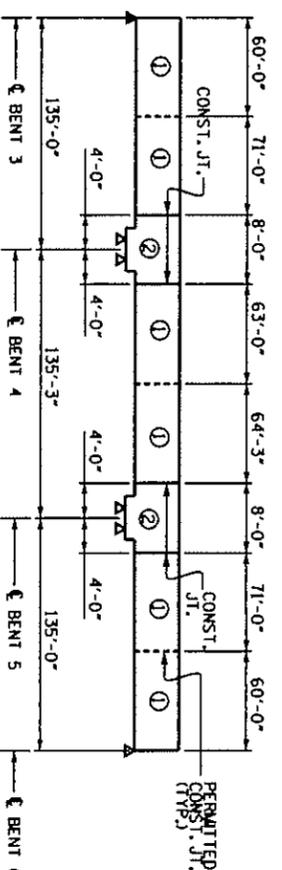
SPANS D-F

DECK POURING SEQUENCE

① INDICATES POUR SEQUENCE AND DIRECTION, WHERE ARROW IS OMITTED EITHER DIRECTION IS PERMITTED.



SPANS B-C



SPANS D-F

REINFORCING STEEL SCHEDULE

SPAN A OR G				SPANS B-C				SPANS D-F									
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	SIZE	TYPE	LENGTH	WEIGHT			
A1	215	5	STR.	42'-9"	9586	A1	431	5	STR.	42'-9"	19218	A1	648	5	STR.	42'-9"	28893
A2	180	4	STR.	4'-10"	581	A2	360	4	STR.	4'-10"	1162	A2	540	4	STR.	4'-10"	1743
B1	232	4	STR.	28'-10"	4468	B4	464	4	STR.	24'-4"	7542	B4	464	4	STR.	24'-4"	7542
B2	18	5	STR.	46'-6"	873	B5	58	6	STR.	36'-3"	3158	B5	116	6	STR.	36'-3"	6316
B3	113	6	STR.	27'-0"	4583	B6	55	6	STR.	40'-6"	3346	B6	110	6	STR.	40'-6"	6691
G1	1	5	STR.	42'-9"	45	B7	58	6	STR.	60'-0"	5227	B7	116	6	STR.	60'-0"	10454
J1	40	4	9	1'-5"	38	B8	30	5	STR.	56'-0"	1752	B9	116	4	STR.	25'-2"	1950
K1	12	4	STR.	22'-6"	180	G1	2	5	STR.	42'-9"	89	B10	42	5	STR.	60'-0"	2628
K2	4	4	STR.	6'-5"	17	J1	80	4	9	1'-5"	76	G1	2	5	STR.	42'-9"	89
K3	16	4	STR.	8'-0"	86	K3	40	4	STR.	8'-0"	214	J1	80	4	9	1'-5"	76
K4	4	4	STR.	5'-0"	13	K4	8	4	STR.	5'-0"	27	K3	80	4	STR.	8'-0"	428
K5	4	4	STR.	2'-3"	6	K7	8	4	STR.	5'-4"	29	K4	16	4	STR.	5'-0"	53
K6	8	4	STR.	3'-0"	16	K8	14	4	STR.	19'-9"	185	K7	16	4	STR.	5'-4"	57
K9	6	8	2	20'-1"	322	K9	12	8	2	20'-1"	643	K8	28	4	STR.	19'-9"	369
K10	4	8	1	13'-7"	145	K10	8	8	1	13'-7"	290	K9	12	8	2	20'-1"	643
S1	28	4	8	14'-7"	273	S2	176	4	5	2'-9"	323	K10	8	8	1	13'-7"	290
S3	28	4	7	11'-11"	223	S5	8	4	6	13'-3"	71	S2	352	4	5	2'-9"	647
S4	26	4	7	11'-8"	203	S6	48	5	3	6'-0"	300	S5	16	4	6	13'-3"	142
S6	24	5	3	6'-0"	150	U1	24	4	4	17'-6"	281	S6	48	5	3	6'-0"	300
												U1	48	4	4	17'-6"	561

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL	APPROACH SLABS	PARAPET AND BARRIER RAIL
#4	2'-0"	1'-9"	2'-0"
#5	2'-6"	2'-2"	2'-6"
#6	3'-0"	2'-7"	3'-10"
#7	5'-3"	3'-6"	2'-7"
#8	6'-10"	4'-7"	

SUPERSTRUCTURE BILL OF MATERIAL

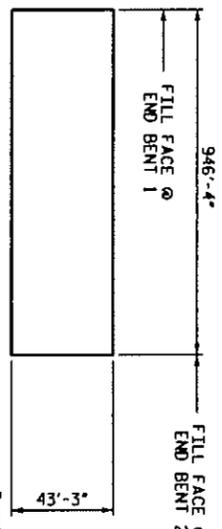
CLASS AA CONCRETE	EPOXY COATED REINFORCING STEEL	(CU. YDS.)	(LBS.)
SPAN A	POUR 1	152.9	21,808
SPAN A	POUR 2	40.0	5,600
SPAN BC	POUR 1	152.0	43,933
SPAN BC	POUR 2	187.4	26,636
SPAN DEF	POUR 1	177.8	25,292
SPAN DEF	POUR 2	187.4	26,636
SPAN G	POUR 1	152.9	21,808
SPAN G	POUR 2	40.0	5,600
TOTALS		1242.4	157,421

** QUANTITIES FOR BARRIER RAIL ARE NOT INCLUDED

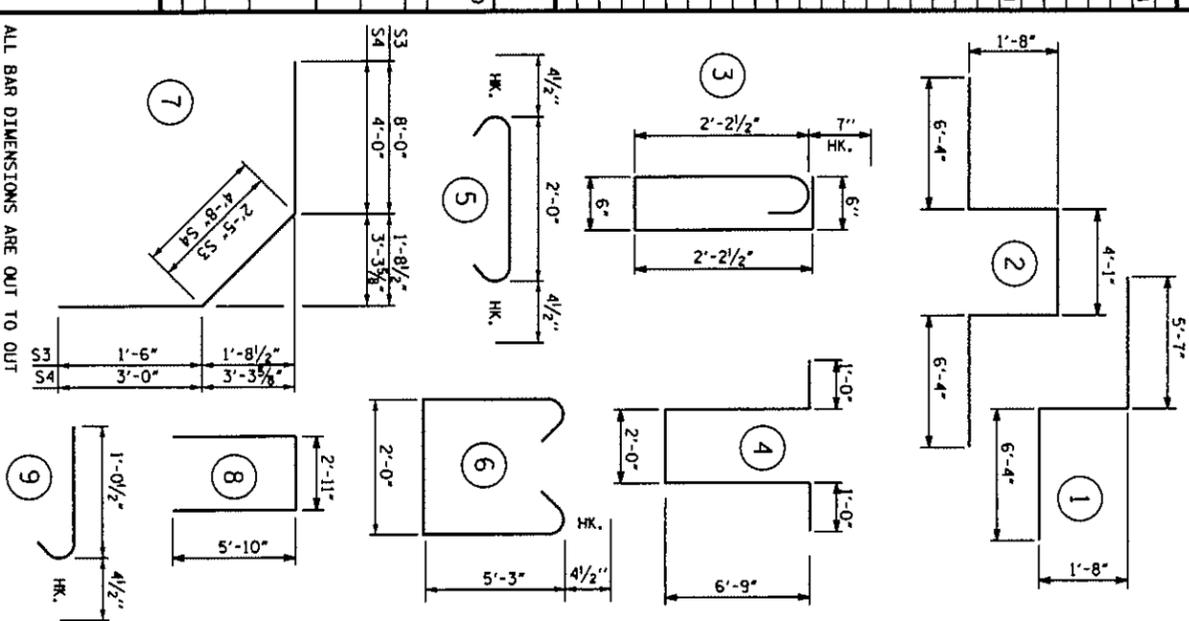
GROOVING BRIDGE FLOORS

APPROACH SLABS	1,787	SO. FT.
BRIDGE DECK	29,836	SO. FT.
TOTAL	31,623	SO. FT.

LAYOUT FOR COMPUTING AREA REINFORCED CONCRETE DECK SLAB (SQ. FT. = 40,929)



BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

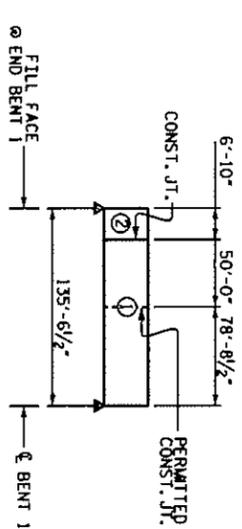
DESIGN ENGINEER OF RECORD: DATE: 1/24/2018
 ASSIGNED BY: R. C. LARSON DATE: 02/16/16
 CHECKED BY: E. C. DECOR
 DRAWN BY: J. AND S. DATE: 09/10/16
 REV. 5/18/16
 REV. 8/16/16
 REV. 5/17/16
 REV. 8/17/16

OPTIONAL POURING SEQUENCE
 POUR CANNOT BE STARTED UNTIL BOTH ADJACENT POURS REACH A MINIMUM OF 3000 PSI.

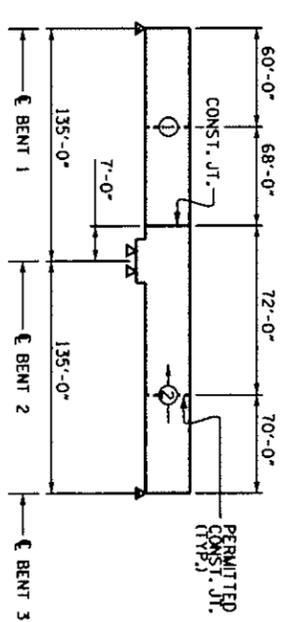
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

KCI Associates
 141114
 1/24/2018

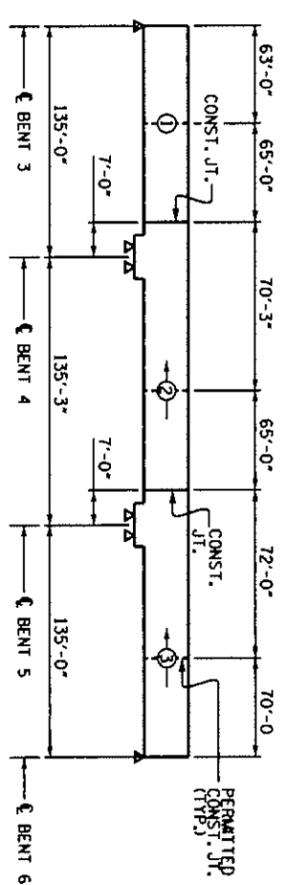
PROJECT NO. R-1015
 COUNTY CRAVEN
 STATION: 287+62.50 -L-
 DEPARTMENT OF TRANSPORTATION
 SUPERSTRUCTURE BILL OF MATERIAL
 LEFT LANE
 SHEET NO. S10-29
 TOTAL SHEETS 44



SPAN A OR G
(SPAN A SHOWN, SPAN G OPPOSITE HAND)



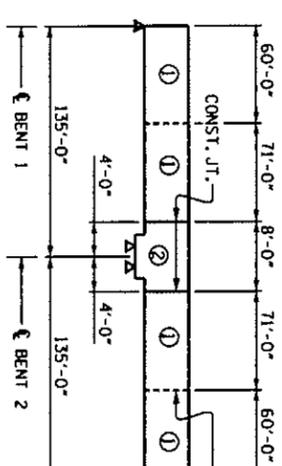
SPANS B-C



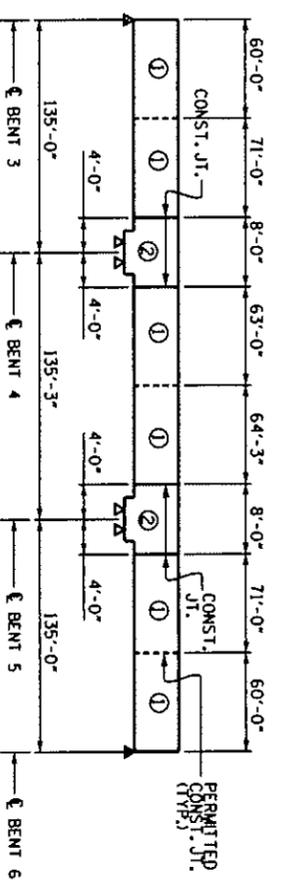
SPANS D-F

DECK POURING SEQUENCE

① INDICATES POUR SEQUENCE AND DIRECTION, WHERE ARROW IS OMITTED EITHER DIRECTION IS PERMITTED.



SPANS B-C



SPANS D-F

OPTIONAL POURING SEQUENCE

② CANNOT BE STARTED UNTIL BOTH ADJACENT POURS REACH A MINIMUM OF 3000 PSI.

REINFORCING STEEL SCHEDULE

SPAN A OR G				SPANS B-C				SPANS D-F						
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	215	5	STR.	42'-9"	A1	431	5	STR.	42'-9"	A1	648	5	STR.	42'-9"
A2	180	4	STR.	4'-10"	A2	360	4	STR.	4'-10"	A2	540	4	STR.	4'-10"
B1	232	4	STR.	28'-10"	B4	464	4	STR.	24'-4"	B4	464	4	STR.	24'-4"
B2	18	5	STR.	46'-6"	B5	58	6	STR.	36'-3"	B5	116	6	STR.	40'-6"
B3	113	6	STR.	27'-0"	B6	55	6	STR.	40'-6"	B6	110	6	STR.	40'-6"
G1	1	5	STR.	42'-9"	B7	58	6	STR.	60'-0"	B7	116	6	STR.	60'-0"
J1	40	4	9	1'-5"	B8	30	5	STR.	56'-0"	B9	116	4	STR.	25'-2"
K1	12	4	STR.	22'-6"	B10	42	5	STR.	60'-0"					
K2	4	4	STR.	6'-5"	G1	2	5	STR.	42'-9"					
K3	16	4	STR.	8'-0"	J1	80	4	9	1'-5"					
K4	4	4	STR.	5'-0"	K3	40	4	STR.	8'-0"					
K5	4	4	STR.	2'-3"	K4	8	4	STR.	5'-0"					
K6	8	4	STR.	3'-0"	K7	8	4	STR.	5'-4"					
K9	6	8	2	20'-1"	K8	14	4	STR.	19'-9"					
K10	4	8	1	13'-7"	K9	12	8	2	20'-1"					
S1	28	4	8	14'-7"	K10	8	8	1	13'-7"					
S3	28	4	7	11'-11"	S2	176	4	5	2'-9"					
S4	26	4	7	11'-8"	S5	8	4	6	13'-3"					
S6	24	5	3	6'-0"	S6	48	5	3	6'-0"					
				150					300					
					U1	24	4	4	17'-6"					
									281					

SUPERSTRUCTURE BILL OF MATERIAL

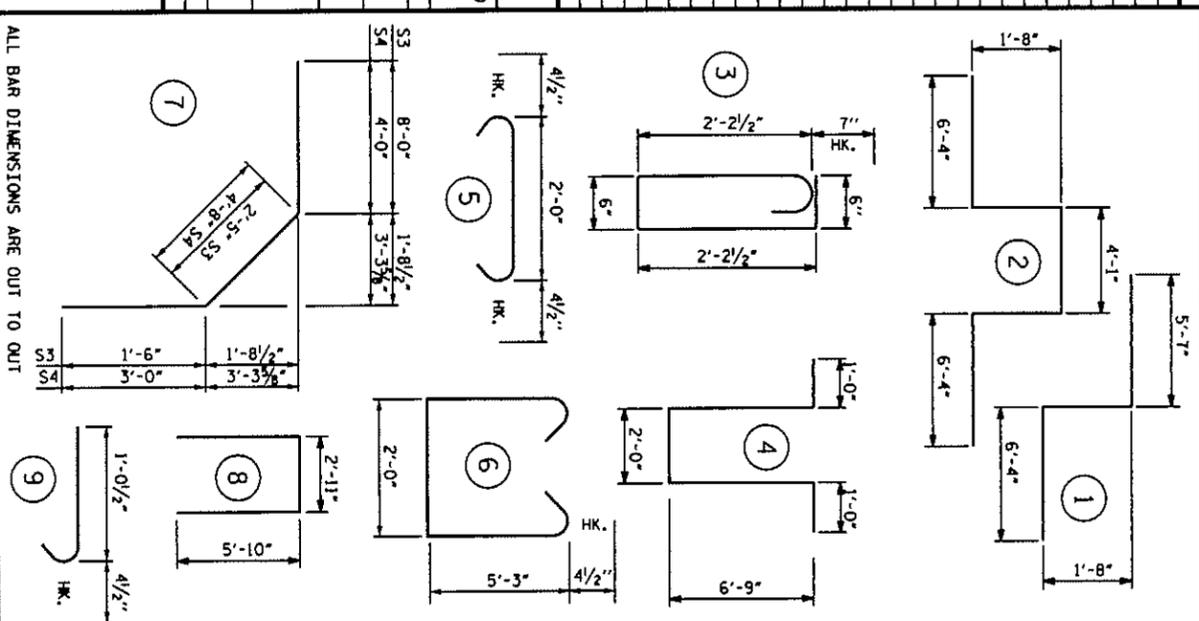
CLASS AA CONCRETE	EPOXY COATED REINFORCING STEEL
SPAN A POUR 1 152.9	21,808
SPAN A POUR 2 40.0	
SPAN BC POUR 1 152.0	43,933
SPAN BC POUR 2 187.4	
SPAN DEF POUR 1 152.0	69,872
SPAN DEF POUR 2 177.8	
SPAN DEF POUR 3 187.4	
SPAN G POUR 1 152.9	21,808
SPAN G POUR 2 40.0	
TOTALS**	1242.4 157,421

** QUANTITIES FOR BARRIER RAIL ARE NOT INCLUDED

GROOVING BRIDGE FLOORS

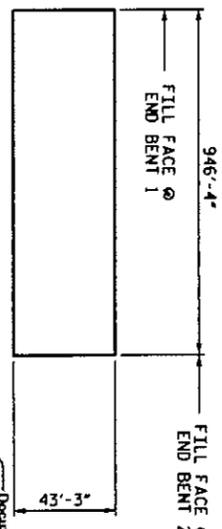
APPROACH SLABS	1,787	SO.FT.
BRIDGE DECK	29,836	SO.FT.
TOTAL	31,623	SO.FT.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

LAYOUT FOR COMPUTING AREA REINFORCED CONCRETE DECK SLAB (SQ. FT. = 40,929)



DESIGN ENGINEER OF RECORD: DATE: 1/14/2013
 ASSIGNED BY: R. C. LARSON
 CHECKED BY: E. C. DECKA
 DRAWN BY: JAG 5/87
 REV. 8/6/99
 REV. 5/1/06
 CHECKED BY: S.D. 9/87

OPTIONAL POURING SEQUENCE
 ② CANNOT BE STARTED UNTIL BOTH ADJACENT POURS REACH A MINIMUM OF 3000 PSI.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

KCI Association of North Carolina, P.A.
 14174
 1/14/2013

DEPARTMENT OF TRANSPORTATION
 PROJECT NO. R-1015
 COUNTY CRAVEN
 STATION: 287+62.50 -L-

SUPERSTRUCTURE BILL OF MATERIAL
 RIGHT LANE

NO. 1
 BY: [Signature]
 DATE: 1/14/2013
 SHEET NO. 44